

Department of the Interior

Agency Name

---

# Aircraft Requirements for Replacement of NXXXX

**Prepared By:**

Agency Office

Address

Address

Date

---

Table of Contents

1 INTRODUCTION..... 3

2 SERVICE LIFE OF MAKE/MODEL, NXXXX ..... 3

2.1 Aircraft in Service ..... 3

2.2 Avionics Obsolescence ..... 4

2.3 Projected Service Life of the Make/Model..... 5

3 MISSION REQUIRMENTS ..... 5

3.1 Table: Payload and Performance..... 5

3.2 Table: Aircraft Requirements ..... 5

3.3 Approved Mission Type Aircraft ..... 6

4 SHORTFALLS ..... 6

4.1 Shortfalls Summary ..... 6

5 MINIMUM FLEET SIZE..... 7

5.1 Aircraft Usage..... 7

5.2 Utilization in 2005 ..... 7

5.3 Utilization in 2006 ..... 8

5.4 Utilization in 2007 ..... 8

5.5 Conclusions..... 8

6 MANAGEMENT METRICS ..... 7

7 DOCUMENT ACCEPTANCE AND RELEASE NOTICE..... 7

1 INTRODUCTION

- Background information on the program using the current aircraft. Include a mission statement; long-term goals of the program; relationship between performance goals I the program’s annual performance plan and the long-term goal in the strategic plan; performance gap with the current aircraft, and how the new acquisition will close it; link between proposed aircraft and long-term planning goal; and any external factors that may affect goal achievement.

2 SERVICE LIFE OF THE CURRENT AIRCRAFT (NXXX)

Where applicable, include three factors that determine the projected service life for the make/model:

- 1 Number of aircraft in service
- 2 Obsolescence issues (if any) that will decrease the projected service life
- 3 NXXX has a higher/lower than average total time on the airframe. \_\_\_\_\_ hours Total Time is significantly higher/lower than the \_\_\_\_\_ hour average for this model year aircraft.

The following sections look at each of these issues.

2.1 Aircraft in Service

Production of the make/model started in 19xx and ended in 19xx (if applicable). During this time the following number of aircraft were produced:

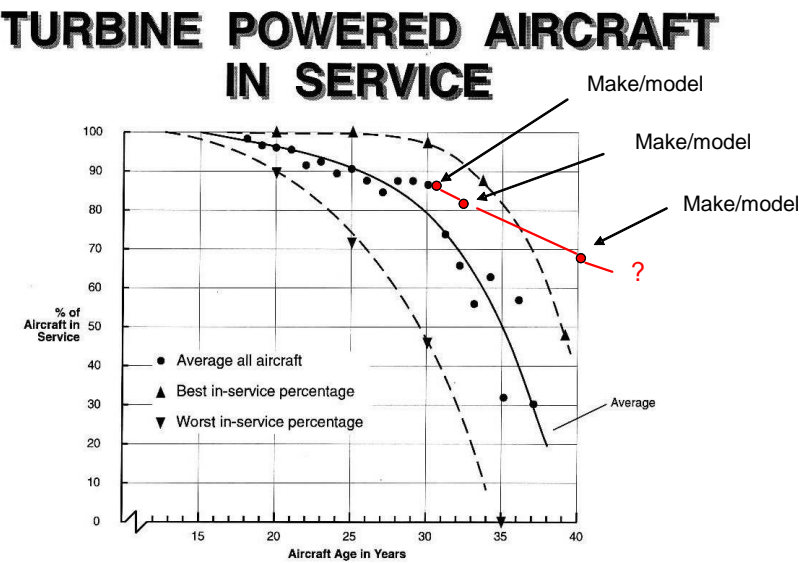
- |              |      |
|--------------|------|
| - Make/Model | XXX  |
| - Make/Model | XXX  |
| - Make/Model | XXX  |
| - Total      | XXXX |

The make/model has proven to be a remarkably popular aircraft because of its unique combination of simplicity, ruggedness, large cabin and payload, good performance and short take-off distances, etc.... According to many, no good replacement aircraft is available and, as discussed below, a large percentage of the aircraft produced are still in service, as applicable.

Include information on the availability of parts, manufacture support, and any other data that would give the reader a sense of how well the aircraft is/will be supported in the future.

An analysis of the in-service fleet of these aircraft shows that over \_\_% of the \_\_ aircraft produced were still in service as of mid-20xx. The average age of this fleet is XX years. The remarkable popularity of this airplane is put in context when the percentage of the fleet in service in mid-20xx is analyzed by model and plotted on a generalized curve of turbine aircraft in service versus age, as shown in Figure 2.1 (if data is available).

Figure 2.1



Source Date

Source Information

The generalized data shown in Figure 2.1 was developed on the basis of research done by \_\_\_\_\_. Provide information about any statistics found. An example, is “The table has three lines. The middle, solid line shows the average percentage of the fleet in service as a function of age. The upper and lower dashed lines show the “best” and “worst” average in-service percentages. Generally, the best in-service percentage will be associated with aircraft that have a) an active manufacturer still manufacturing this class of aircraft, b) a large diverse user base of different types of operators, c) a strong aircraft, engine and avionics manufacturer’s after sales support program and d) unique performance or payload characteristics that are not duplicated by newer aircraft.” as developed by Conklin & deDecker.

Give as much information about the current make/model in-service compared with other aircraft of the same type as possible, demonstrating how well the aircraft is supported, or is expected to be supported in the future, as compared with the average age of the make/model. Provide information on how long the aircraft is likely to be in service, to project an estimated year of required replacement.

**2.2 Obsolescence Issues**

Provide any information on obsolescence issues that may affect future cost/performance of the current aircraft in meeting mission objectives. Give as much information as possible related to this issue.

## 2.3 Projected Service Life of the Make/Model

Provide information on how long this make/model can be expected to continue performing mission objectives.

## 3 MISSION REQUIREMENTS

The mission requirements are discussed in detail above, in the Requirements Document, and are summarized in the following tables (Table 3.1 and 3.2). *Note: the elements in the requirements document and summarized in the table are just an example, you should include mission requirements specific to your program need. Information should quantify the requirements of meeting your mission, rather than specify an aircraft make or model that is desired to be acquired. The performance measures should lead to a variety of aircraft that may meet your needs, so further analysis can be conducted in the business case analysis to determine which alternative provides the best cost alternative for meeting the mission requirements.*

### 3.1 Table: Payload and Performance

<b>Specified Aircraft mission</b>		
- Required Seats	#	
- Equipment rack	#	
- Total payload	# minimum	Pounds
- Endurance with # person payload	#	Hours
- Other Requirements	#	measurement
<b>Second Specified Aircraft mission</b>		
- Required Seats	#	
<b>Aircraft Configuration</b>		
Passenger Loading	(##) Air stair	
Passenger Seating	#	
- Interior furnishings	(Is there anything unique??)	
Pilot seats	#	
Jump Door	# inches wide, # inches high min.	
<b>Miscellaneous</b>		
Certification	Day/Night/Icing/IFR/Etc...	
Avionics	IFR, TAWS/EGPWS & TCAS II, Etc....	
Avionics and Cockpit Displays	Digital with LCD displays desired, Etc....	
Maximum Flight Crew	#	
<b>Utilization</b>		
Mission Utilization		
A.	xxx Hours	
B.	xxx Hours	
Total per year	xxx Hours	

### 3.2 Table: Aircraft Requirements

1	
2	
3	

4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	
21	
22	
23	
24	

### 3.3 Mission Aircraft Information

- Provide any information available that would identify “approved aircraft” for meeting specific missions, as agreed to by various interagency committees, and background on why the aircraft were selected/approved for the mission.
- Identify how the aircraft replacement will meet DOI interoperability goals.
- Identify how the aircraft fits into the Agency strategic goal for aviation.

## 4 SHORTFALLS

Shortfalls identified with the current asset, or gaps that are expected to be closed in acquiring a new asset.

### 4.1 Shortfalls Summary

- Specific items identified:
  - 
  - 
  -

5 MINIMUM FLEET SIZE

Review the entire program, and outline how this asset fits into the broader perspective, including other assets that are available in the location, either through contract, rental, or interagency use. Provide a discussion of how the asset mix meets/doesn't meet the strategic goal of the agency/program, and how it will be used to meet mission objectives. Include an explanation of why the mix of assets currently available is or isn't the best alternative to accomplish the requirements, and any other options that could be considered (including UAS or non-aircraft alternatives that could be considered), or are being used, as part of meeting the mission.

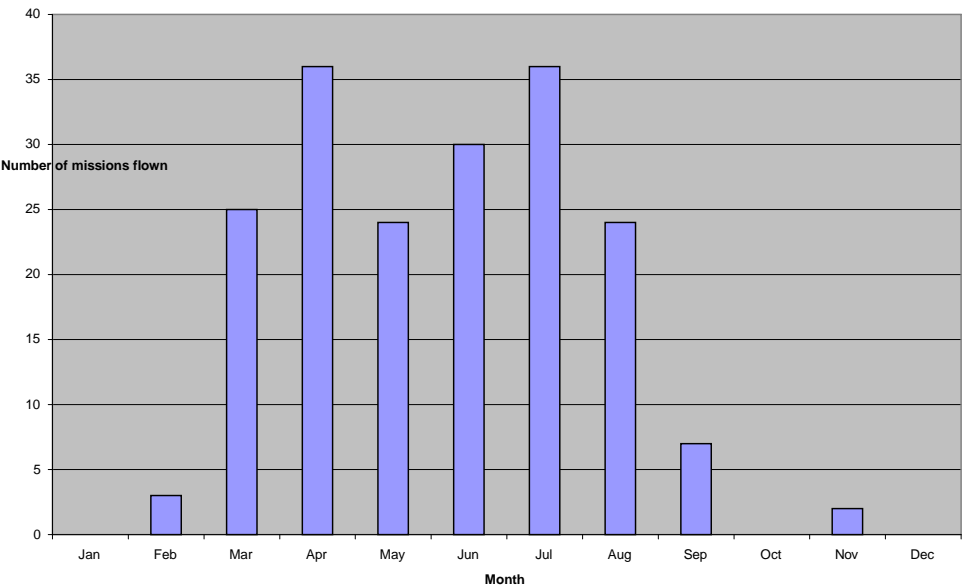
5.1 Aircraft Usage

The aircraft flew \_\_\_\_ total hours from \_\_\_\_\_ through \_\_\_\_\_. This is an average of \_\_\_\_ hours per year. Graphs 5.2, 5.3, and 5.4 show the utilization represented by sorties per month. This information was gathered from the Aircraft flight Use Reports from the past three years.

Also include information related to sharing of the aircraft between bureaus and programs, if applicable, and how competing interests for the aircraft use will be handled.

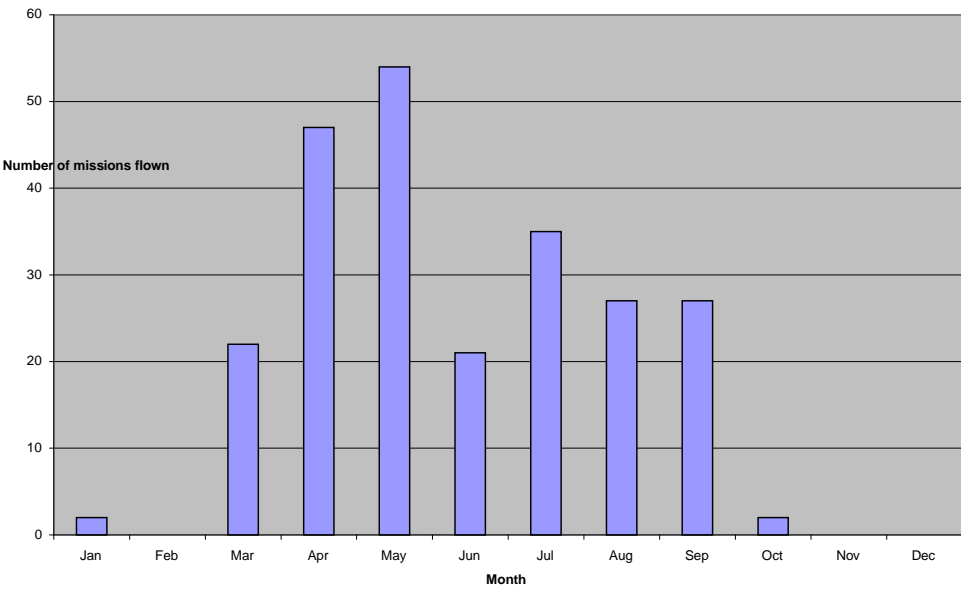
5.2 Utilization in FY \_\_\_\_\_

Graph 5.2 Utilization of NXXX during FY \_\_\_\_\_



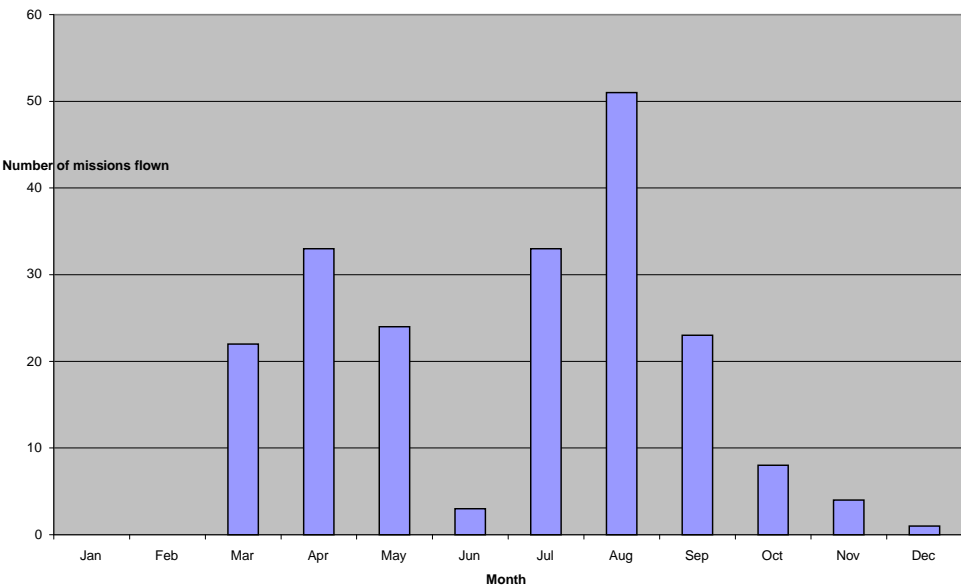
5.3 Utilization in FY \_\_\_\_\_

Graph 5.3 Utilization of N\_\_\_\_\_ during FY \_\_\_\_\_



5.4 Utilization in FY \_\_\_\_\_

Graph 5.4 Utilization of N\_\_\_\_\_ during FY \_\_\_\_\_



5.5 Conclusions

The information presented clearly indicates that the (Agency) utilizes the current fleet aircraft at a level which justifies ownership in total hours as flown in month to month and per year operations.....



## 6 MANAGEMENT METRICS

Metrics to be used to report on the status of the \_\_\_\_\_ aircraft program are as follows. (Note: *This should be based on information that is available to the agency, which can be tracked and monitored. If the sample metrics below can not currently be tracked, we either need to identify alternative metrics, or develop a method that will enable us to track and verify that goals are being met.*)

- Departure Dispatch Reliability Rate Goal: \_\_\_\_%

Any scheduled flight will dispatch within \_\_\_\_ minutes of the scheduled departure time \_\_\_\_% of the time. Delays beyond \_\_\_\_ minutes will be counted if they are due to mechanical causes or due to lack of an available, qualified flight crew or other causes of delay such as weather, ATC, user delays, etc.

- Operations Scheduling Effectiveness Goal: \_\_\_\_%

The program will maintain an operational scheduling effectiveness rate of at least \_\_\_\_%. Operational scheduling effectiveness is measured by dividing the total number of scheduled missions accomplished by the total number of missions scheduled. The only scheduled missions that do not count in this ratio are scheduled missions that are cancelled by the user.

- Fleet Availability Rate Goal: \_\_\_\_%

The overall availability rate for the aircraft will be at least \_\_\_\_%. To meet this requirement the program must have an airworthy aircraft with a qualified crew available at least \_\_\_\_% of the time.

- Accident/Incident Rate Goal: 0

For obvious reasons, the goal for this metric is zero – no accidents or incidents. To date the \_\_\_\_\_ program has experienced \_\_\_\_\_ accidents or incidents in the last 5 years.

## 7 DOCUMENT ACCEPTANCE and RELEASE NOTICE

This is \_\_\_\_ (date) \_\_\_\_ of the **Baseline of NXXXX**.

The Exhibit 300 of NXXX is a managed document. For identification of amendments, each page contains a version number. Changes will be issued only as a complete replacement document.

PREPARED: \_\_\_\_\_ DATE: \_\_\_\_/\_\_\_\_/\_\_\_\_  
(For acceptance) (\_\_\_\_\_, Document Owner)

ACCEPTED: \_\_\_\_\_ DATE: \_\_\_\_/\_\_\_\_/\_\_\_\_  
(For release) ([Name, title], ABOD/WT Member)

ACCEPTED: \_\_\_\_\_ DATE: \_\_\_\_/\_\_\_\_/\_\_\_\_  
(For release) ([Name, title], AMD Technical Representative)

ACCEPTED: \_\_\_\_\_ DATE: \_\_\_\_/\_\_\_\_/\_\_\_\_  
(For release) ([Name, title], Sponsoring Agency ABOD Member)

ACCEPTED: \_\_\_\_\_ DATE: \_\_\_\_/\_\_\_\_/\_\_\_\_  
(For release) ([Name, title], ABOD Member)

ACCEPTED: \_\_\_\_\_ DATE: \_\_\_\_/\_\_\_\_/\_\_\_\_  
(For release) ([Name, title], ABOD Member)

ACCEPTED: \_\_\_\_\_ DATE: \_\_\_\_/\_\_\_\_/\_\_\_\_  
(For release) ([Name, title], ABOD Member)

ACCEPTED: \_\_\_\_\_ DATE: \_\_\_\_/\_\_\_\_/\_\_\_\_  
(For release) ([Name, title], ABOD Member)

ACCEPTED: \_\_\_\_\_ DATE: \_\_\_\_/\_\_\_\_/\_\_\_\_  
(For release) ([Name, title], ABOD Member)

ACCEPTED: \_\_\_\_\_ DATE: \_\_\_\_/\_\_\_\_/\_\_\_\_  
(For release) ([Name, title], ABOD Member)

ACCEPTED: \_\_\_\_\_ DATE: \_\_\_\_/\_\_\_\_/\_\_\_\_  
(For release) ([Name, title], ABOD Member)